

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

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1. (Original) A segregated user interface for parameter configuration in a multi-path failover system, comprising:

a user interface module capable of receiving configuration parameters for a multi-path failover system from a user; and

an object module capable of receiving the configuration parameters from the user interface module, wherein the object module is capable of detecting a current controller status of a controller and a current device status of a device, and wherein the object module is further capable of configuring a failover driver using the received configuration parameters.

2. (Original) A segregated user interface as recited in claim 1, wherein the user interface module is capable of displaying the current controller status and the current device status.

3. (Original) A segregated user interface as recited in claim 1, wherein the received configuration parameters include logical unit number (LUN) masking parameters.

4. (Currently Amended) A segregated user interface ~~as recited in claim 3~~ for parameter configuration in a multi-path failover system, comprising:

a user interface module capable of receiving configuration parameters for a multi-path failover system from a user, wherein the received configuration parameters include

logical unit number (LUN) masking parameters, wherein the LUN masking parameters include a LUN masking without input/output (I/O) request blocking; and

an object module capable of receiving the configuration parameters from the user interface module, wherein the object module is capable of detecting a current controller status of a controller and a current device status of a device, and wherein the object module is further capable of configuring a failover driver using the received configuration parameters.

5. (Original) A segregated user interface as recited in claim 4, wherein the LUN masking parameters include a LUN masking with I/O request blocking.

6. (Original) A segregated user interface as recited in claim 1, wherein the object module is capable of disabling and enabling failover features for a particular data path.

7. (Original) A segregated user interface as recited in claim 6, wherein the failover features represent an ability to reroute an I/O request destined for a particular I/O device when a primary data path to the I/O device has failed.

8. (Currently Amended) A method for configuring parameters in a multi-path failover system, comprising the operations of:

detecting a current controller status of a controller and the current device status of a device;

displaying the current controller status and the current device status to a user;

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receiving configuration parameters for a multi-path ~~mult-path~~ failover system from the user, the configuration parameters including logical unit number (LUN) masking parameters; and

configuring a failover driver using the received configuration parameters.

9. (Currently Amended) A method as ~~recited in claim 8~~, for configuring parameters in a multi-path failover system, comprising the operations of:

detecting a current controller status of a controller and the current device status of a device;

displaying the current controller status and the current device status to a user;

receiving configuration parameters for a multi-path failover system from the user, the configuration parameters including logical unit number (LUN) masking parameters, wherein the LUN masking parameters include a LUN masking without input/output (I/O) request blocking; and

configuring a failover driver using the received configuration parameters.

10. (Original) A method as recited in claim 9, wherein the LUN masking parameters include a LUN masking with I/O request blocking.

11. (Original) A method as recited in claim 10, wherein the failover driver rejects all I/O requests destined for a device having a LUN masking with I/O request blocking.

12. (Original) A method as recited in claim 11, wherein a device having a LUN masking parameter is hidden from an operating system.

13. (Original) A method as recited in claim 8, further comprising the operation of disabling and enabling failover features for a particular data path.

14. (Original) A method as recited in claim 13, wherein the failover features represent an ability to reroute an I/O request destined for a particular I/O device when a primary data path to the I/O device has failed.

15. (Currently Amended) A system for configuring parameters in a multi-path ~~mult-path~~ failover system, comprising:

a user interface module capable of receiving configuration parameters for a multi-path failover system from a user;

an object module capable of receiving the configuration parameters from the user interface module, wherein the object module is capable of detecting a current controller status of a controller and the current device status of a device; and

a failover driver in communication with the object module, wherein the failover driver is capable of receiving the configuration parameters from the object module, wherein the failover driver is configured using the received configuration parameters.

16. (Currently Amended) A system as recited in claim 15, wherein the multi-path failover system is configured to direct I/O requests to storage devices, and the multi-paths communicate with the storage devices, and wherein the failover driver is configured to detect the multi-paths and to determine prior and current status of the multi-paths, the failover driver being further configured to calculate a failure probability for each detected path based on the respective prior and current status of the multi-path and to select, for the communication with the storage device, the path having a lowest probability of failure

~~wherein the user interface module is capable of displaying the current controller status and the current device status.~~

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17. (Original) A system as recited in claim 15, wherein the configuration parameters include logical unit number (LUN) masking parameters.

18. (Currently Amended) A system ~~as recited in claim 17~~, for configuring parameters in a multi-path failover system, comprising:

a user interface module capable of receiving configuration parameters for a multi-path failover system from a user, wherein the configuration parameters include logical unit number (LUN) masking parameters, wherein the LUN masking parameters include a LUN masking without input/output (I/O) request blocking;

an object module capable of receiving the configuration parameters from the user interface module, wherein the object module is capable of detecting a current controller status of a controller and the current device status of a device; and

a failover driver in communication with the object module, wherein the failover driver is capable of receiving the configuration parameters from the object module, wherein the failover driver is configured using the received configuration parameters.

19. (Original) A system as recited in claim 18, wherein the LUN masking parameters include a LUN masking with I/O request blocking.

20. (Original) A system as recited in claim 15, wherein the failover driver is capable of receiving disable and enable failover parameters for a particular data path from the object module.

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21. (Original) A system as recited in claim 20, wherein the failover driver reroutes I/O requests destined for a particular I/O device when a primary data path to the I/O device has failed in response to receiving an enable failover parameter.

22. (Original) A segregated user interface for parameter configuration in a multi-path failover system, comprising:

a user interface module capable of receiving configuration parameters for a multi-path failover system from a user, the user interface module further capable of displaying a current controller status and a current device status; and

an object module capable of receiving the configuration parameters from the user interface module, wherein the object module is capable of detecting a current controller status of a controller and the current device status of a device, and wherein the object module is further capable of configuring a failover driver using the received configuration parameters, wherein the configuration parameters include a LUN masking without input/output (I/O) request blocking parameter and a LUN masking with I/O request blocking parameter.

23. (Original) A segregated user interface as recited in claim 22, wherein the object module is capable of disabling and enabling failover features for a particular data path.

24. (Original) A segregated user interface as recited in claim 23, wherein the failover features represent an ability to reroute an I/O request destined for a particular I/O device when a primary data path to the I/O device has failed.

A5 25. (Currently Amended) A method for configuring parameters in a multi-path ~~multi-path~~-failover system, comprising the operations of:

detecting a current controller status of a controller and the current device status of a device;

displaying the current controller status and the current device status to a user;

receiving configuration parameters for a multi-path ~~multi-path~~-failover system from the user, the configuration parameters including a LUN masking without input/output (I/O) request blocking parameter and a LUN masking with I/O request blocking parameter; and

configuring a failover driver using the received configuration parameters such that the failover driver rejects all I/O requests destined for a device having a LUN masking with I/O request blocking, and wherein a device having a LUN masking parameter is hidden from an operating system.

26. (Original) A method as recited in claim 25, further comprising the operation of disabling and enabling failover features for a particular data path.

27. (Original) A method as recited in claim 26, wherein the failover features represent an ability to reroute an I/O request destined for a particular I/O device when a primary data path to the I/O device has failed.

28. (Currently Amended) A system for configuring parameters in a multi-path ~~multi-path~~-failover system, comprising:

a user interface module capable of receiving configuration parameters for a multi-path failover system from a user, the user interface module further capable of displaying a current controller status and a current device status; and

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an object module capable of receiving the configuration parameters from the user interface module, wherein the object module is capable of detecting a current controller status of a controller and the current device status of a device, wherein the configuration parameters include a LUN masking without input/output (I/O) request blocking parameter and a LUN masking with I/O request blocking parameter; and

a failover driver in communication with the object module, wherein the failover driver is capable of receiving the configuration parameters from the object module, wherein the failover driver is configured using the received configuration parameters.

29. (Original) A system as recited in claim 28, wherein the failover driver is capable of receiving disable and enable failover parameters for a particular data path from the object module.

30. (Original) A system as recited in claim 29, wherein the failover driver reroutes I/O requests destined for a particular I/O device when a primary data path to the I/O device has failed in response to receiving an enable failover parameter.

31. (Currently Amended) A method for providing an interface to a failover driver, comprising the operation ~~operations~~ of:

providing a segregated user interface, the segregated user interface having a front end to receive user commands and a back end to provide configuration commands to a failover driver.

32. (Original) A method as recited in claim 31, wherein the configuration parameters include logical unit number (LUN) masking parameters.

AS 33. (Original) A method ~~as recited in claim 32~~, for providing an interface to a failover driver, comprising the operation of:

providing a segregated user interface, the segregated user interface having a front end to receive user commands and a back end to provide configuration commands to a failover driver, wherein configuration parameters include logical unit number (LUN) masking parameters, wherein the LUN masking parameters include a LUN masking without input/output (I/O) request blocking .

34. (Original) A method as recited in claim 33, wherein the LUN masking parameters include a LUN masking with I/O request blocking.
